Peter J Burke

List of Publications by Year
in descending order

106 papers	5,578 citations	136950 32 h-index	79698 73 g-index
107 all docs	107 docs citations	107 times ranked	5287 citing authors

#	Article	IF	Citations
1	Luttinger liquid theory as a model of the gigahertz electrical properties of carbon nanotubes. IEEE Nanotechnology Magazine, 2002, 1, 129-144.	2.0	521
2	An RF circuit model for carbon nanotubes. IEEE Nanotechnology Magazine, 2003, 2, 55-58.	2.0	356
3	Quantitative theory of nanowire and nanotube antenna performance. IEEE Nanotechnology Magazine, 2006, 5, 314-334.	2.0	330
4	Mitochondria, Bioenergetics and Apoptosis in Cancer. Trends in Cancer, 2017, 3, 857-870.	7.4	299
5	Terahertz photoconductivity and plasmon modes in double-quantum-well field-effect transistors. Applied Physics Letters, 2002, 81, 1627-1629.	3.3	296
6	Nanotube electronics for radiofrequency applications. Nature Nanotechnology, 2009, 4, 811-819.	31.5	269
7	Carbon Nanotube Transistor Operation at 2.6 GHz. Nano Letters, 2004, 4, 753-756.	9.1	213
8	AC performance of nanoelectronics: towards a ballistic THz nanotube transistor. Solid-State Electronics, 2004, 48, 1981-1986.	1.4	201
9	Electrical Properties of 0.4 cm Long Single-Walled Carbon Nanotubes. Nano Letters, 2004, 4, 2003-2007.	9.1	195
10	Frequency Dependence of Shot Noise in a Diffusive Mesoscopic Conductor. Physical Review Letters, 1997, 78, 3370-3373.	7.8	187
11	Electronic manipulation of DNA, proteins, and nanoparticles for potential circuit assembly. Biosensors and Bioelectronics, 2004, 20, 606-619.	10.1	181
12	Carbon Nanotube Radio. Nano Letters, 2007, 7, 3296-3299.	9.1	176
13	High-Performance Semiconducting Nanotube Inks: Progress and Prospects. ACS Nano, 2011, 5, 8471-8487.	14.6	157
14	High frequency conductivity of the high-mobility two-dimensional electron gas. Applied Physics Letters, 2000, 76, 745-747.	3.3	155
15	Microwave Transport in Metallic Single-Walled Carbon Nanotubes. Nano Letters, 2005, 5, 1403-1406.	9.1	122
16	Nanoelectromagnetics: Circuit and Electromagnetic Properties of Carbon Nanotubes. Small, 2009, 5, 884-906.	10.0	121
17	Detection of Interferon gamma using graphene and aptamer based FET-like electrochemical biosensor. Biosensors and Bioelectronics, 2015, 71, 294-299.	10.1	117
18	Fundamental Limits on the Mobility of Nanotubeâ€Based Semiconducting Inks. Advanced Materials, 2011, 23, 94-99.	21.0	104

#	Article	IF	Citations
19	Terahertz graphene optics. Nano Research, 2012, 5, 667-678.	10.4	95
20	Cardiac tissue engineering: state-of-the-art methods and outlook. Journal of Biological Engineering, 2019, 13, 57.	4.7	89
21	Manipulating Nanoparticles in Solution with Electrically Contacted Nanotubes Using Dielectrophoresis. Langmuir, 2004, 20, 8612-8619.	3.5	86
22	Wafer scale synthesis of dense aligned arrays of single-walled carbon nanotubes. Nano Research, 2008, 1, 158-165.	10.4	81
23	Length scaling of bandwidth and noise in hotâ€electron superconducting mixers. Applied Physics Letters, 1996, 68, 3344-3346.	3.3	65
24	Synthesis of Aligned Arrays of Millimeter Long, Straight Single-Walled Carbon Nanotubes. Chemistry of Materials, 2004, 16, 3414-3416.	6.7	65
25	Large bandwidth and low noise in a diffusionâ€cooled hotâ€electron bolometer mixer. Applied Physics Letters, 1996, 68, 1558-1560.	3.3	61
26	A large-area and contamination-free graphene transistor for liquid-gated sensing applications. Applied Physics Letters, 2013, 103, .	3.3	54
27	rf resistance and inductance of massively parallel single walled carbon nanotubes: Direct, broadband measurements and near perfect 50Î© impedance matching. Applied Physics Letters, 2008, 93, .	3.3	49
28	A Graphene and Aptamer Based Liquid Gated FET-Like Electrochemical Biosensor to Detect Adenosine Triphosphate. IEEE Transactions on Nanobioscience, 2015, 14, 967-972.	3.3	42
29	Mixing and noise in diffusion and phonon cooled superconducting hot-electron bolometers. Journal of Applied Physics, 1999, 85, 1644-1653.	2.5	40
30	Ultrahigh Frequency Carbon Nanotube Transistor Based on a Single Nanotube. IEEE Nanotechnology Magazine, 2007, 6, 400-403.	2.0	40
31	Broadband impedance match to two-dimensional materials in the terahertz domain. Nature Communications, 2017, 8, 2233.	12.8	37
32	Carbon-Nanotubeâ€“Electrolyte Interface: Quantum and Electric Double Layer Capacitance. ACS Nano, 2018, 12, 9763-9774.	14.6	37
33	Nanotubeâ˜Peptide Interactions on a Silicon Chip. Journal of Physical Chemistry C, 2009, 113, 3978-3985.	3.1	32
34	Charging the Quantum Capacitance of Graphene with a Single Biological Ion Channel. ACS Nano, 2014, 8, 4228-4238.	14.6	32
35	Nanofluidic Platform for Single Mitochondria Analysis Using Fluorescence Microscopy. Analytical Chemistry, 2013, 85, 6018-6025.	6.5	31
36	Three-dimensional transistor arrays for intra- and inter-cellular recording. Nature Nanotechnology, 2022, 17, 292-300.	31.5	30

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37	A heterodyne receiver at 533 GHz using a diffusion-cooled superconducting hot electron bolometer mixer. IEEE Transactions on Applied Superconductivity, 1995, 5, 2236-2239.	1.7	28
38	Towards a single-chip, implantable RFID system: is a single-cell radio possible?. Biomedical Microdevices, 2010, 12, 589-596.	2.8	27
39	Polyelectrolyte multilayer electrostatic gating of graphene field-effect transistors. Nano Research, 2014, 7, 1650-1658.	10.4	27
40	Microwave nanotube transistor operation at high bias. Applied Physics Letters, 2006, 88, 233115.	3.3	22
41	Ultrahigh conductivity of large area suspended few layer graphene films. Applied Physics Letters, 2012, 101, 263101.	3.3	22
42	Assessment of mitochondrial membrane potential using an on-chip microelectrode in a microfluidic device. Lab on A Chip, 2010, 10, 1683.	6.0	20
43	AC conductivity parameters of graphene derived from THz etalon transmittance. Nanoscale, 2014, 6, 13895-13899.	5.6	20
44	Versatile Bottom-Up Synthesis of Tethered Bilayer Lipid Membranes on Nanoelectronic Biosensor Devices. ACS Applied Materials & Interfaces, 2017, 9, 14618-14632.	8.0	20
45	Carbon nanotube devices for GHz to THz applications. , 2004, , .		19
46	Controlling Nucleation Density While Simultaneously Promoting Edge Growth Using Oxygen-Assisted Fast Synthesis of Isolated Large-Domain Graphene. Chemistry of Materials, 2016, 28, 6511-6519.	6.7	19
47	Submillimolar Detection of Adenosine Monophosphate Using Graphene-Based Electrochemical Aptasensor. IEEE Nanotechnology Magazine, 2017, 16, 196-202.	2.0	19
48	Resonant frequency response of plasma wave detectors. Applied Physics Letters, 2006, 89, 213512.	3.3	18
49	NANOSCALE IMAGING TECHNOLOGY FOR THz-FREQUENCY TRANSMISSION MICROSCOPY. International Journal of High Speed Electronics and Systems, 2008, 18, 205-222.	0.7	18
50	Cristae remodeling causes acidification detected by integrated graphene sensor during mitochondrial outer membrane permeabilization. Scientific Reports, 2016, 6, 35907.	3.3	18
51	Nanoscale Devices for Large-Scale Applications. IEEE Microwave Magazine, 2010, 11, 72-80.	0.8	17
52	Detection of single ion channel activity with carbon nanotubes. Scientific Reports, 2015, 5, 9208.	3.3	17
53	Silicon nitride gate dielectric for top-gated carbon nanotube field effect transistors. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2004, 22, 3112.	1.6	16
54	Broadband conductivity of graphene from DC to THz. , 2011, , .		16

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55	Measurement of the combined quantum and electrochemical capacitance of a carbon nanotube. Nature Communications, 2019, 10, 3598.	12.8	16
56	A Safe, Open Source, 4G Connected Self-Flying Plane With 1 Hour Flight Time and All Up Weight (AUW) <300 g: Towards a New Class of Internet Enabled UAVs. IEEE Access, 2019, 7, 67833-67855.	4.2	16
57	Wafer-scale mitochondrial membrane potential assays. Lab on A Chip, 2012, 12, 2719.	6.0	15
58	Scanning Microwave Microscopy of Vital Mitochondria in Respiration Buffer. , 2018, 2018, 115-118.		15
59	Nanotubes and Nanowires. Selected Topics in Electornics and Systems, 2007, , .	0.2	13
60	Self-assembled gold nanowires from nanoparticles: an electronic route towards DNA nanosensors. , 2004, 5515, 117.		11
61	ac ballistic transport in a two-dimensional electron gas measured inGaAsâˆ•AlGaAsheterostructures. Physical Review B, 2005, 72, .	3.2	10
62	Effect of Source, Surfactant, and Deposition Process on Electronic Properties of Nanotube Arrays. Journal of Nanomaterials, 2011, 2011, 1-7.	2.7	9
63	Resistive flow sensing of vital mitochondria with nanoelectrodes. Mitochondrion, 2017, 37, 8-16.	3.4	9
64	Ballistic transport at GHz frequencies in ungated HEMT structures. Solid-State Electronics, 2004, 48, 2013-2017.	1.4	8
65	Sensing of DNA by graphene-on-silicon FET structures at DC and 101 GHz. Sensing and Bio-Sensing Research, 2015, 5, 19-23.	4.2	8
66	Scalable and reusable micro-bubble removal method to flatten large-area 2D materials. Applied Physics Letters, 2018, 112, .	3.3	8
67	Small Unmanned Aircraft Systems (SUAS) and Manned Traffic near John Wayne Airport (KSNA) Spot Check of the SUAS Facility Map: Towards a New Paradigm for Drone Safety Near Airports. Drones, 2019, 3, 84.	4.9	8
68	Electronic manipulation of DNA and proteins for potential nano-bio circuit assembly. , 2004, , .		7
69	Aligned array FETs as a route toward THz nanotube transistors. , 2005, , .		7
70	A Three-Dimensional Printed Inertial Microfluidic Platform for Isolation of Minute Quantities of Vital Mitochondria. Analytical Chemistry, 2022, 94, 6930-6938.	6.5	7
71	NanoStat: An open source, fully wireless potentiostat. Electrochimica Acta, 2022, 422, 140481.	5.2	7
72	Spectrum of thermal fluctuation noise in diffusion and phonon cooled hot-electron mixers. Applied Physics Letters, 1998, 72, 1516-1518.	3.3	6

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73	Carbon nanotube antennas. , 2006, 6328, 41.		6
74	Microchambers with Solid-State Phosphorescent Sensor for Measuring Single Mitochondrial Respiration. Sensors, 2016, 16, 1065.	3.8	6
75	Microfabricated arrays of cylindrical wells facilitate singleâ€molecule enzymology of Î±â€chymotrypsin. Biotechnology Progress, 2009, 25, 929-937.	2.6	5
76	Layered graphene-mica substrates induce melting of DNA origami. Materials Research Express, 2018, 5, 045035.	1.6	5
77	Detection of Immunoglobulin E with a Graphene-Based Field-Effect Transistor Aptasensor. Journal of Sensors, 2018, 2018, 1-8.	1.1	4
78	A 4G-Connected Micro-Rover With Infinite Range. IEEE Journal on Miniaturization for Air and Space Systems, 2020, 1, 154-162.	2.7	4
79	Demonstration and application of diffusive and ballistic wave propagation for drone-to-ground and drone-to-drone wireless communications. Scientific Reports, 2020, 10, 14782.	3.3	4
80	Sensing the electrical activity of single ion channels with top-down silicon nanoribbons. Nano Futures, 2018, 2, 025008.	2.2	3
81	4G Antipode: Remote Control of a Ground Vehicle From Around the World. IEEE Journal on Miniaturization for Air and Space Systems, 2020, 1, 150-153.	2.7	3
82	â€œCloudStation:â€•A Cloud-Based Ground Control Station for Drones. IEEE Journal on Miniaturization for Air and Space Systems, 2021, 2, 36-42.	2.7	3
83	Scaling of the microwave and dc conductance of metallic single-walled carbon nanotubes. , 2005, 6003, 113.		2
84	Preface to Special Topic: Selected Papers from the International Conference on Flexible and Printed Electronics, Jeju Island, Korea, 2009. Journal of Applied Physics, 2010, 108, 102701.	2.5	2
85	Protein nanopore-gated bio-transistor for membrane ionic current recording. , 2011, , .		2
86	Editorial [device concepts, architectural strategies, and interfacing methodologies for realizing nanoscale sensor systems]. IEEE Nanotechnology Magazine, 2011, 10, 3-6.	2.0	2
87	Radio frequency nanoelectronics based on carbon nanotubes. , 2012, , .		2
88	Towards perfect impedance matching of free space to a 2D material. , 2014, , .		2
89	4G coverage mapping with an ultra-micro drone. , 2019, , .		2
90	An ultra-high bandwidth nano-electronic interface to the interior of living cells with integrated fluorescence readout of metabolic activity. Scientific Reports, 2020, 10, 10756.	3.3	2

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91	Fluorescence Analysis of Single Mitochondria with Nanofluidic Channels. Methods in Molecular Biology, 2015, 1264, 35-46.	0.9	2
92	Integrated Fluorescence and Scanning Microwave Microscopy: Nano-Imaging with â€œProof of Lifeâ€ , 2019, , .		2
93	An RF Circuit Model of a Quantum Point Contact. IEEE Sensors Journal, 2010, 10, 391-394.	4.7	1
94	Fabrication of supported lipid bilayer (SLB) and nanotube transistor hybrid biosensing platform using microfluidic channels. , 2011, , .		1
95	Towards perfect impedance matching of free space to a 2D material. , 2014, , .		1
96	Physical and Electrical Characterization of Synthesized Millimeter Size Single Crystal Graphene, Using Controlled Bubbling Transfer. Nanomaterials, 2021, 11, 2528.	4.1	1
97	Electrochemiluminescence as a tool for microscopy at the nanoscale. , 2004, 5331, 13.		0
98	Electronics gets mechanical. Physics World, 2005, 18, 22-23.	0.0	0
99	Design, fabrication, and impedance of plasma wave detectors. , 2005, , .		0
100	Carbon nanotube purified ink-based printed thin film transistors: Novel approach in controlling the electrical performance. , 2011, , .		0
101	Novel approach towards performance enhancement of all semiconducting carbon nanotube devices for printed electronics. , 2011, , .		0
102	Performance Control of High Mobility, Printed Thin Film Transistors using Semiconducting Nanotube Ink. Materials Research Society Symposia Proceedings, 2011, 1340, 1.	0.1	0
103	All-Semiconducting Nanotube Networks: Towards High Performance Printed Nanoelectronics. Materials Research Society Symposia Proceedings, 2011, 1283, 1.	0.1	0
104	Electromagnetic coupling to nano-devices: 2D vs. 1D. , 2015, , .		0
105	NANOSCALE IMAGING TECHNOLOGY FOR THZ-FREQUENCY TRANSMISSION MICROSCOPY. Selected Topics in Electornics and Systems, 2008, , 463-480.	0.2	0
106	4G Signal Propagation at Ground Level. IEEE Transactions on Antennas and Propagation, 2022, 70, 2891-2903.	5.1	0